

### REMARKS

This is in response to the Office Action that was mailed on November 29, 2006. The features of dependent claims 13 and 15 are incorporated into independent claim 12, and claims 13 and 15 are accordingly cancelled, without prejudice. No new matter is introduced by this Amendment, and – *since the Examiner has already fully considered dependent claims 13 and 15 on their merits* – no new issues are raised by this Amendment. Entry of this Amendment, in order to place the application into condition for allowance or into better condition for appeal, is earnestly solicited. With this Amendment, claims 12 and 14 remain pending in the application.

#### Double patenting

Claims 12-15 were rejected on the ground of obviousness-type double patenting over claim 1 of US 6,463,734 (Tamura) in view of EP 0 915 244 (Kameko) and US 5,376,610 (Takahata). Office Action, page 7. The Examiner argues that “The same comments with respect to Tamura et al., Kameko [sic] et al. and Takahata et al., from above, apply”. MPEP 804 states that any obviousness-type double patenting rejection should make clear the differences between the inventions defined by the conflicting claims – that is, claims 12 and 14 here and claim 1 of US 6,463,734. MPEP 804 states that when considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. The Examiner has clearly not stated a sustainable double patenting rejection of any claim in the present application over claim 1 of the Tamura patent.

*Kaneko in view of Takahata*

Claims 12-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 915,244 (Kaneko) in view of US 5,376,610 (Takahata). Office Action, pages 4-5. In partial support of this rejection, the Examiner argues that “the range of each component in the layers of the three-way catalyst of Takahata et al. encompasses the ranges recited in the instant claims”. Applicants respectfully request that the Examiner identify by column and line citation the portions of the Takahata disclosure that “encompass” a catalyst inner layer containing an admixture of both rhodium and platinum as noble metals, wherein a ratio of rhodium to platinum content in the inner layer is from 1:1 to 1:10, and a catalyst surface layer containing platinum in a range from 0.05 to 20.0 g/l of catalyst volume.

*Tamura in view of Kaneko and Takahata*

Claims 12-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over US 6,463,734 B1 (Tamura) in view of Kaneko and Takahata. Office Action, pages 5-6. In partial support of this rejection, the Examiner argues on page 6 of the Office Action that “the range of each component in the layers of the three-way catalyst of Takahata et al. encompasses the ranges recited in the instant claims”. Applicants respectfully request that the Examiner identify by column and line citation the portions of the Takahata disclosure that “encompass” a catalyst inner layer containing an admixture of both rhodium and platinum as noble metals, wherein a ratio of rhodium to platinum content in the inner layer is from 1:1 to 1:10, and a catalyst surface layer containing platinum in a range from 0.05 to 20.0 g/l of catalyst volume.

*The Examiner's response to arguments*

On page 2 of the Office Action, the Examiner acknowledges that Takahata does not actually disclose any catalyst used in Applicants' apparatus. Instead, Takahata is relied upon to suggest varying catalysts that he actually discloses in ways that would convert the catalysts actually disclosed into Applicants' catalysts. The bottom line is that, even combining technology actually disclosed in the Kaneko and Takahata references, one would still not have any apparatus encompassed by Applicants' claims. After making this theoretical combination, one would have to then change the catalysts actually disclosed by Takahata in view of generic theorizing in the Takahata reference. It is respectfully suggested that this approach to rejecting the present claims necessarily involves impermissible hindsight.

On page 3 of the Office Action, the Examiner argues that "the three-way catalyst of Takahata et al. comprises each of the instantly claimed catalytic elements, the three-way catalyst must inherently be operable under the above air-fuel ratios" (emphasis supplied). The Examiner is requested to identify by column and line citation where in the Takahata patent Applicants can find "the three-way catalyst" in question, so that Applicants can consider whether they wish to verify by testing whether the three-way catalyst of Takahata is in fact operable under the air-fuel ratios in question.

*Summary and conclusion*

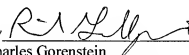
According to the Takahata reference, if rhodium and platinum are admixed in a layer of a catalyst, the rhodium readily forms an alloy with the platinum to cause catalyst deactivation. *In spite of this problem*, however, the three-way catalyst of the present invention provides

beneficial functions, by having an inner layer that contains an admixture of both rhodium and platinum, so that the resulting catalyst of this invention can provide improved hydrocarbon purifying performance during theoretical air-fuel ratio operation and transition from a lean air-fuel ratio to a theoretical air-fuel ratio. Takahata not only does not suggest the beneficial function provided by the present invention, he even teaches away from it by virtue of his teaching that if rhodium and platinum are admixed in a layer of a catalyst, the rhodium readily forms an alloy with the platinum to cause catalyst deactivation. Takahata fails to *motivate* persons of ordinary skill in the art to admix rhodium with platinum in the manner reflected in Applicants' claims in order to obtain the above-mentioned beneficial function.

The Examiner is respectfully urged to withdraw the rejections of record. If there are any questions, the Examiner is invited to telephone Richard Gallagher (Registration No. 28,781) at (703) 205-8008.

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Respectfully submitted,

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